Index of Authors

Entries marked * refer to abstracts or titles of papers listed in Proceedings at meetings of the Society for Applied Bacteriology. Small roman numerals refer to pages in Proceedings at meetings of the Society for Applied Bacteriology.

Entries marked † refer to the titles of Symposium papers published in a separate volume.

ABAD-LORANZO, J. L. & RODRIGUEZ-VALERA, F. Photodynamic inactivation of *Bacillus subtilis* spores 339

AL-AZAWI, H. *see* FAKHRI, O.

*AL-JEBOURI, M. M. Incidence of antibiotic resistance among the bacterial flora of sewage and freshwater in Mousel, Iraq xv

†ALLEN-AUSTIN, D. *see* AUSTIN, B.

AL-WAILI, N. *see* FAKHRI, O.

*ANDREWS, D. Microbial spoilage of wine and its control x

ANDREWS, R. E. JR. *see* WIE, S. I.

ANIAN, G. *see* LAWRENCE, G.

*APPLEYARD, G. Antiviral agents—present position and future prospects v

ARIAS, J. M. *see* MUÑOZ, J.

ARMSTRONG, D. G. *see* SILLEY, P.

ARNAUD, A. *see* BUI, K.

*ASHWORTH, J. The investigation of poor microbiological water quality in drinks vending machines xiii

†AUSTIN, B. & ALLEN-AUSTIN, D. Water quality in relation to intensive fish farming ii

BALDRY, M. G. C. The antimicrobial properties of magnesium monoperoxyphthalate hexahydrate 499

BALL, L. C. *see* COLMAN, G.

BATES, J. *see* LAWRENCE, G.

*BAUTISTA, L. *see* GAYA, P.

BECKMANN, I. *see* MEISEL-MIKOŁAJCZYK, F.

BELL, R. G. & DE LACY, K. M. Heat injury and recovery of *Streptococcus faecium* associated with the souring of chub-packed luncheon meat 229

BELL, R. G. & DE LACY, K. M. Influence of NaCl, $NaNO_2$ and oxygen on the germination and growth of *Bacillus licheniformis*, an organism of chub-packed luncheon meat 523

*BERGELIN, L. A. *see* ISBISTER, J. D.

BERINGER, J. E. *see* RUIZ-SAINZ, J. E.

*BETAIEB, M. *see* JONES, K.

*BEVERIDGE, M. A. *see* HARRISON, L. A.

BIAVATI, B. *see* CROCIANI, F.

*BLATCHFORD, N. R. Imidazole antifungal agents v

BLICKSTAD, E. & MOLIN, G. Growth and end-product formation in fermenter cultures of *Brochothrix thermosphacta* ATCC 11509^T and two psychrotrophic *Lactobacillus* spp. in different gaseous atmospheres 213

BOARD, R. G. *see* DALTON, H. K.

BRAMLEY, A. J., MCKINNON, C. H., STAKER, R. T. & SIMPKIN, D. L. The effect of udder infection on the bacterial flora of the bulk milk of ten dairy herds 317

*BRIMELOW, C. J. B. Principles and problems in the development of intermediate moisture foods viii

*BRODIE, C., MILLER, A. J. & WOLSTENHOLME, J. Conductimetric measurements on media during microbial growth xviii

BROOKER, B. E. & FULLER, R. The adhesion of coagulase negative staphylococci to human skin and its relevance to the bacterial flora of milk 325

BROOKER, B. E. *see* MARSHALL, V. M.

*BROWN, J. R. Agents for protozoal diseases vi

BROWN, R. *see* LAWRENCE, G.

BROXTON, P., WOODCOCK, P. M., HEATLEY, F. & GILBERT, P. Interaction of some polyhexamethylene biguanides and membrane phospholipids in *Escherichia coli* 115

*BRYANT, T. N. *see* LEE, J. V.

BUI, K., MAESTRACCI, M., THIERY, A., ARNAULD, A. & GALZY, P. A note on the enzymic action and biosynthesis of nitrile-hydratase from a *Brevibacterium* sp. 183

BULLA, L. A. JR. *see* WIE, S. I.

†BURNHAM, C. J. *see* DAFT, M. J.

*CARR, J. G. Spoilage of cider x

CASTAGNOLI, P. *see* CROCIANI, F.

CHANDLER, M. R. *see* RUIZ-SAINZ, J. E.

CHAVARRI, F. J. *see* NUÑEZ, J. A.

CHOPRA, A. K. & MATHUR, D. K. Isolation, screen and characterization of thermophilic *Bacillus* species isolated from dairy products 263

*CLARK, A. E. & TOOTH, S. J. Detection of yeasts by conductance measured with particular reference to fruit drinks xv

†COLBOURNE, J. S. Materials usage and their microbiological quality of water supplies i
COLE, W. M. *see* MARSHALL, V. M.
*COLLARD, P. *see* RHODES, P.
COLLINS, C. H., GRANGE, J. M. & YATES, M. D. Mycobacteria in water 193
COLLINS, P. *see* JONES, P. W.
COLMAN, G. & BALL, L. C. Identification of streptococci in a medical laboratory 1
COLWELL, R. R. *see* GRIMES, D. J.
CROCIANI, F., BIAVATI, B., CASTAGNOLI, P. & MATTEUZZI, D. Anaerobic ureolytic bacteria from caecal content and soft faeces of rabbit 83
CUTRI, S. S., MACAULEY, B. J. & ROBERTS, W. P. Characteristics of pathogenic non-fluorescent (smooth) and non-pathogenic fluorescent (rough) forms of *Pseudomonas tolaasii* and *Pseudomonas gingeri* 291
†DAFT, M. J., YAMAMOTO, Y. & BURNHAM, C. J. Algal blooms; consequences, prevention and cure ii
DAINTY, R. H., EDWARDS, R. A. & HIBBARD, C. M. Volatile compounds associated with the aerobic growth of some *Pseudomonas* species on beef 75
*DALTON, H. K. & BOARD, R. G. The role of yeasts in sulphite binding in British fresh sausages xv
DAVIES, K. W., STRAWDERMAN, W. E. & WHITBY, J. L. The rationale and a computer evaluation of a gamma irradiation sterilization dose determination method for medical devices using a substerilization incremental dose sterility test protocol 31
DAVIES, M. *see* LAWRENCE, G.
*DAWOUD, E. *see* VERACHTERT, H.
*DAY, A. Rapid detection of microbial spoilage organisms xi
DE BOER, S. H. Enumeration of two competing *Erwinia carotovora* populations in potato tubers by a membrane filter–immunofluorescence procedure 517
DE KINKELIN, P. *see* MICHEL, C.
DE LACY, K. M. *see* BELL, R. G.
*DENNIS, P. J. The isolation of Legionellaceae from water xvii
DENYER, S. P. *see* LUSHER, P.
DERRICK, C. M. *see* MACKEY, B. M.
*DESOUVA, A. E. *see* ISBISTER, J. D.
*DOLAN, T. C. S. Bacterial contamination in scotch whiskey fermentations ix
EDWARDS, R. A. *see* DAINTY, R. H.
†EGLI, TH. *see* HAMER, G.
†EVISON, L. M. Bacterial pollution of coastal waters in the UK and Mediterranean i
FAKHRI, O., AL-WAILI, N., AL-AZAWI, H. & MAKKIYA, A. A note on xenogenic transfusions of macrophages in experimental septicaemia 531
†FALLOWFIELD, H. J. & GARRETT, M. K. The treatment of water by algal culture ii
FAUST, R. M. *see* WIE, S. I.
FELTHAM, R. K. A., WOOD, P. A. & SNEATH, P. H. A. A general-purpose system for characterizing medically important bacteria to genus level 279
*FENLON, D. R. A comparison of *Listeria* spp. isolated from silage, sewage and wild bird faeces in the north of Scotland xv
*FERGUSON, I. R. Antianaerobic agents v
FERREIRA, N. P. & TRACEY, R. P. Numerical taxonomy of cholesterol-degrading bacteria 429
*FLINT, K. P. *see* HARRISON, L. A.
*FLINT, K. P. The effects of Bacteriophage on *Escherichia coli* survival in freshwater xviii
*FLINT, K. P. The effects of culture pH, carbon source and orthophosphate on the phosphatase enzymes of a chromobacterium species xii
FINCH, L. A. & MARTIN, D. R. Human and bovine group B streptococci: two distinct populations 273
FRANC, G. D. *see* MCCARTER-ZORNER, N. J.
FRASER, T. W. *see* SPEERS, J. G. S.
*FRICKER, C. R. & GIRDWOOD, R. W. A. Dissemination of salmonella by seagulls in Scotland: A national survey xiii
*FRICKER, C. R., MATHER, H. A. & HUGHES, S. Observations on the isolation of *Campylobacter* from water xviii
FULLER, R. *see* BROOKER, B. E.
GALZY, P. *see* BUI, K.
†GARRETT, M. K. *see* FALLOWFIELD, H. J.
*GAYA, P., MEDINA, M., BAUTISTA, L. & NUÑEZ, M. Survival of *Staphylococcus aureus* in raw sheep milk manchego cheeses ripened at different temperatures xvii
*GAYA, P. *see* MEDINA, M.
*GIBSON, D. M. Fish applications v
GILBERT, P. *see* BROXTON, P.
GILL, S. S. *see* WIE, S. I.
GILMOUR, A. *see* SPEERS, J. G. S.
*GIRWOOD, R. W. A. *see* FRICKER, C. R.
GORMAN, S. P., SCOTT, E. M. & HUTCHINSON, E. P. Emergence and development of resistance to antimicrobial chemicals and heat in spores of *Bacillus subtilis* 153
*GOULD, G. W. The reaction of micro-organisms to changes in water activity vii
GRAHAM, D. C. *see* MCCARTER-ZORNER, N. J.
GRANGE, J. M. *see* COLLINS, C. H.
GRATE, E. *see* WIE, S. I.

*Greenwood, D. Antimicrobial resistance and how it may be overcome vii
Griffiths, M. W. & Phillips, J. D. Detection of post-pasteurization contamination of cream by impedimetric methods 107
Grimes, D. J., Singleton, F. L. & Colwell, R. R. Allogenic succession of marine bacterial communities in response to pharmaceutical waters 247
Guðbjörnsdóttir, B. *see* Valdimarsson, G.
Gutierrez-Navarro, A. M. *see* Ruiz-Sainz, J. E.
*Gutteridge, C. S. Rapid methods—where are we going? ii
†Hamer, G., Egli, Th. & Mechsener, Ki. Biological treatment of industrial wastewater—a microbial basis for process performance i
Hammock, B. D. *see* Wie, S. I.
Hanninen, M.-L., Korkeala, H. & Pakkala, P. Effect of various gas atmospheres on the growth and survival of *Campylobacter jejuni* on beef 89
*Harper, P. B. *see* Simpson, I. N.
Harper, S. H. T. & Lynch, J. M. Nitrogen fixation by cellulolytic communities at aerobic-anaerobic interfaces in straw 131
*Harrison, L. A., Beveridge, M. A. & Flint, K. P. The use of immobilized neutral phosphatase to detect river pollulants xiii
Harrison, M. D. *see* McCarter-Zorner, M. J.
Hayle, A. J. *see* Jones, P. W.
Haywood, A. C. & Sly, L. L. Characterization of a dextranolytic biotype of *Flavobacterium multivorum* from soil 505
Heatley, F. *see* Broxton, P.
Hibbard, C. M. *see* Dainty, R. H.
*Hooper, M. Antimycobacterial agents with particular reference to leprosy vi
*Hopton, J. W. The maintenance energy of stream-borne bacteria xvi
*Hughes, S. *see* Fricker, C. R.
Hugo, W. B. *see* Lusher, P.
Humphrey, T. J., Lanning, D. G. & Leeper, D. The influence of scald water pH on the death rates of *Salmonella typhimurium* and other bacteria attached to chicken skin 355
*Humphrey, T. J. The influence of sub-lethal injury in *Campylobacter jejuni* on its subsequent resistance to antibiotics xvi
Hutchinson, E. P. *see* Gorman, S. P.
*Isbister, J. D., Simmons, J. A., DeSouza, A. E. & Bergelin, L. A. Rapid coliphage method for determination of sanitary water quality xiii
*Ison, R. W. The effects of a_w on the dissociation constant of acid-potentiated food preservatives viii
*Jago, P. H. & Stanfield, G. Application of ATP determination to growth potential in water iv
Jimenez-Diaz, R. *see* Ruiz-Sainz, J. E.
†Jones, F. & Watkins, J. The water cycle as a source of pathogens i
*Jones, K. & Betaieb, M. Nitrogen-fixing enterobacteriaceae in the waters and sediments of Morecambe Bay xii
Jones, P. W., Collins, P. & Hayle, A. J. The effect of sodium sulphacetamide and sodium mandelate in brillant green agar on the growth of salmonellas 423
*Kocur, M. *see* Ventosa, A.
Korkeala, H. *see* Hänninen, M.-L.
Lanning, D. G. *see* Humphrey, T. J.
Larsen, J. L. *Vibro anguillarrum*: Influence of temperature, pH, NaCl and incubation time on growth 237
Latty, J. B. *see* Shaw, B. G.
*Lawrence, D. R. Bacterial spoilage of beer ix
Lawrence, G., Brown, R., Bates, J., Saul, A., Davies, M., Spark, R. & Anian, G. An affinity technique for the isolation of *Clostridium perfringens* type c from man and pigs in Papua New Guinea 333
*Lee, J. V. & Bryant, T. N. A numerical taxonomic study of *Aeromonas* xvii
Leeper, D. *see* Humphrey, T. J.
†Lester, J. N. & Sterritt, R. M. Microbial accumulation of heavy metals in wastewater treatment processes i
Lindgren, S. & Refai, O. Amylolytic lactic acid bacteria in fish silage 221
†Lloyd, B. J., Wheeler, D. & Pardon, M. Safe water in the third world i
Lusher, P., Denyer, S. P. & Hugo, W. B. A note on the effect of dilution and temperature on the bactericidal activity of potassium sorbate 179
Lynch, J. M. *see* Harper, S. H. T.
Lyon, G. D. A note on the effect of temperature on the sensitivity of *Erwinia carotovora* subsp. *atroseptica* to the phytoalexin rishitin 191
Macauley, B. J. *see* Cutri, S. S.
Mackey, B. M. & Derrick, C. M. Conductance measurements of the lag phase of injured *Salmonella typhimurium* 299
Maestracci, M. *see* Bui, K.
Makkiya, A. *see* Fakhri, O.
Malcolm, S. A note on the use of the non-central *t*-distribution in setting numerical microbiological specifications for foods 175
*Marquez, M. C., Ventosa, A. & Ruiz-Berraquero, F. Distribution and types of micro-organisms from a solar saltern xvi
Marshall, V. M., Cole, W. M. & Brooker, B. E. Observations on the structure of kefir

grains and the distribution of the microflora 491
MARTIN, D. R. *see* FINCH, L. A.
*MASTERS, P. J., SLOCOMBE, B. & WARRACK, J. K. Investigations into the effects *in vitro* of bacterial cell morphology during the determination of minimum inhibitory concentration using ABBOT MS-2 xiv
*MATHER, H. A. *see* FRICKER, C. R.
MATHUR, S. N. *see* SRIVASTAVA, R. A. K.
MATHUR, D. K. *see* CHOPRA, A. K.
MATTEUZZI, D. *see* CROCIANI, F.
MAULE, A. & WRIGHT, S. J. L. Herbicide effect on the population growth of some green algae and cyanobacteria 369
MCCALL, R. D. *see* SPEERS, J. G. S.
MCCARTER-ZORNER, N. J., FRANC, G. D., HARRISON, M. D., MICHAUD, J. E., QUINN, C. E., SELLS, I. A. & GRAHAM, D. C. Soft rot *Erwinia* bacteria in surface and underground waters in southern Scotland and in Colorado, United States 95
MCKINNON, C. H. *see* BRAMLEY, A. J.
MCLOUGHLIN, A. J. & VALLOM, J. K. The influence of ionic gradients on flocculation of *Brevibacterium* sp. 485
†MECHSENER, K. I. *see* HAMER, G.
*MEDINA, M., GAYA, P. & NUÑEZ, M. Production of roquefortine by *Penicillum roqueforti* isolates from Cadrales blue cheese xvii
*MEDINA, M. *see* GAYA, P.
MEISEL-MIKOŁAJCZYK, F., ROKOSZ, A., SAWICKA-GRZELAK, A., ZUIJDERUIJN, J., BECKMANN, I. & PAELINCK, J. Immunochemical and biological studies of antigens isolated from a strain of *Bacteroides fragilis* 405
MICHAUD, J. E. *see* MCCARTER-ZORNER, N. J.
MICHEL, C., SUPRIN, L. & DE KINKELIN, P. A microdilution method for drug sensitivity testing of fish associated bacteria at 22°C 15
*MILLER, A. J. *see* BRODIE, C.
MOLIN, G. *see* BLICKSTAD, E.
MONTOYA, E. *see* MUÑOZ, J.
*MOOGAN, I. J. & QUESNEL, L. B. The lethality of low concentrations of hydrogen peroxide at pH 6 to 11 and temperatures from 50° to 80°C for *Bacillus* spores xiv
MOSSEL, D. A. A. *see* VAN NETTEN, P.
MULLINGS, R. & PARISH, J. H. Mesophilic aerobic Gram nagative cellulose degrading bacteria from aquatic habitat and soils 455
MULLINGS, R. & PARISH, J. H. Colony morphogenesis in a group of cellulose degrading Gram negative rods from brackish habitats 469
MUÑOZ, J., ARIAS, J. M. & MONTOYA, E. Production and properties of a bacteriocin from *Myxococcus coralloides* D 69
NUÑEZ, J. A., CHAVARRI, F. J. & NUÑEZ, M. Psychrotrophic bacterial flora of raw ewes' milk, with particular reference to Gram negative rods 23
NUÑEZ, M. *see* GAYA, P.
NUÑEZ, M. *see* MEDINA, M.
NUÑEZ, M. *see* NUÑEZ, J. A.
PAELINCK, J. *see* MEISEL-MIKOŁAJCZYK, F.
PAKKALA, P. *see* HÄNNINEN, M.-L.
†PARDON, M. *see* LLOYD, B. J.
PARISH, J. H. *see* MULLINGS, R.
†PARKER, J. Microbiology of aquifiers i
†PARKES, R. J. & TAYLOR, J. Characterization of microbial populations in polluted marine sediments ii
*PATEL, P. D. Techniques for the manipulation of viable micro-organisms ii
PELL, P. A. & SNEATH, P. H. A. A note on the survival of bacteria in cryoprotectant medium at temperatures above 0°C 165
PETTIPHER, G. G. *see* RODRIGUES, U. M.
*PETTIPHER, G. L. DEFT: developments and non-dairy applications iii
PETTS, D. N. The enrichment and early detection of *Streptococcus pyogenes* in skin lesions, using colistin, oxolinic acid, Todd Hewitt broth and latex agglutination 479
PHILLIPS, J. D. *see* GRIFFITHS, M. W.
†PIKE, E. B. & RIDGEWAY, J. W. The microbiological implications in European Community directives related to water and sewage sludge i
*PRIEST, F. G. Chairman's introduction ix
*PUGH, S. J. The application of rapid methods to the confectionery industry iv
*QUESNEL, L. B. *see* MORGAN, I. J.
*QUESNEL, L. B. *see* RHODES, P.
QUINN, C. E. *see* MCCARTER-ZORNER, N. J.
QUINN, J. P. The modification and evaluation of some cytochemical techniques for the enumeration of metabolically active heterotropic bacteria in the aquatic environment 51
REFAI, O. *see* LINDGREN, S.
*RHODES, P., QUESNEL, L. B. & COLLARD, P. Growth kinetics of salmonella and three competitor organisms in four enrichment media xix
†RIDGEWAY, J. W. *see* PIKE, E. B.
*RIVERO, A. M. *see* VENTOSA, A.
*ROBERTS, R. T. The measurement of water activity viii
ROBERTS, W. P. *see* CUTRI, S. S.
*ROBERTSHAW, A. H. Meat applications v
ROBINSON, J. P. *see* SLEAT, R.
RODRIGUES, U. M. & PETTIPHER, G. L. Use of

the Direct Epifluorescent Filter Technique for predicting the keeping quality of pasteurized milk within 24 hours 125
RODRIGUEZ-VALERA, F. *see* ABAD-LORANZO, J. L.
ROKOSZ, A. *see* MEISEL-MIKOŁAJCZYK, F.
*RUIZ-BERRAQUERO, F. *see* VENTOSA, A.
RUIZ-SAINZ, J. E., BERINGER, J. E. & GUTIERREZ-NAVARRO, A. M. Effect of fungicide captafol on the survival and symbiotic properties of *Rhizobium trifolii* 361
RUIZ-SAINZ, J. E., CHANDLER, M. R., JIMENEZ-DIAZ, R. & BERINGER, J. E. Transfer of a host range plasmid from *Rhizobium leguminosarum* to fast-growing bacteria that nodulate soybeans 309
SAUL, A. *see* LAWRENCE, G.
SAWICKA-GRZELAK, A. *see* MEISEL-MIKOŁAJCZYK, F.
SCHAEFFER, C. H. *see* WIE, S. I.
SCOTT, E. M. *see* GORMAN, S. P.
SELLS, I. A. *see* MCCARTER-ZORNER, N. J.
*SHAPTON, N. Applications within the dairy industry iv
SHAW, B. G. & LATTY, J. B. A study of the relative incidence of different *Pseudomonas* groups on meat using a computer-assisted identification technique employing only carbon source tests 59
*SHAW, S. Applications in the brewing industry iv
SILLEY, P. & ARMSTRONG, D. G. Changes in metabolism of the rumen bacteria *Streptococcus bovis* H13/1 resulting from alteration in dilution rates and glucose supply per unit time 345
*SIMMONS, J. A. *see* ISBISTER, J. D.
SIMPKIN, D. L. *see* BRAMLEY, A. J.
*SIMPSON, I. N. & HARPER, P. B. The contribution of β-lactamase stability to the design of broad spectrum β-lactam antibiotics vii
SINGLETON, F. L. *see* GRIMES, D. J.
†SLATER, J. H. Microbial degradation of recalcitrant and xenobiotic compounds ii
SLEAT, R. & ROBINSON, J. P. The bacteriology of anaerobic degradation of aromatic compounds 381
*SLOCOMBE, B. *see* MASTERS, P. J.
SLY, L. L. *see* HAYWOOD, A. C.
SMITH, H. The biochemical challenge of microbial pathogenicity 395
SNEATH, P. H. A. *see* FELTHAM, R. K. A.
SNEATH, P. H. A. *see* PELL, P. A.
SPARK, R. *see* LAWRENCE, G.
SPEERS, J. G. S., GILMOUR, A., FRASER, T. W. & MCCALL, R. D. Scanning electron microscopy of dairy equipment surfaces contaminated by two milk-borne micro-organisms 139
SRIVASTAVA, R. A. K. & MATHUR, S. N. Regulation of amylase bio-synthesis in growing and non-growing cells of *Bacillus stearothermophilus* 147
†STALKER, R. M. *see* THORPE, R. H.
STAKER, R. T. *see* BRAMLEY, A. J.
*STANFIELD, G. *see* JAGO, P. H.
*STANNARD, C. J. ATP: principles and food applications iii
STRAWDERMAN, W. E. *see* DAVIES, K. W.
†STERRITT, R. M. *see* LESTER, J. N.
†STEWART, D. J. Microbial problems in the off-shore oil and gas industries ii
SUPRIN, L. *see* MICHEL, C.
†TAYLOR, J. *see* PARKES, R. J.
THIERY, A. *see* BUI, K.
†THORPE, R. H. & STALKER, R. M. The microbiological requirements for water used in food manufacturing operations ii
*TILBURY, R. H. Spoilage of foods with reduced water activity by osmotolerant yeasts viii
*TOOTH, S. J. *see* CLARKE, A. E.
TRACEY, R. P. *see* FERREIRA, N. P.
†TYLER, J. M. Occurrence in water of viruses of puplic health significance i
VALDIMARSSON, G. & GUÐBJÖRNSDÓTTIR, B. The microbiology of stockfish during the drying process 413
VALLOM, J. K. *see* MCLOUGHLIN, A. J.
VAN DER ZEE, H. *see* VAN NETTEN, P.
VAN NETTEN, P., VAN DER ZEE, H. & MOSSEL, D. A. A. A note on catalase enhanced recovery of acid injured cells of Gram negative bacteria and its consequences for the assessment of the lethality of L-lactic acid decontamination of raw meat surfaces 169
*VENTOSA, A., RIVERO, A. M., RUIZ-BERRAQUERO, F. & KOCUR, M. A taxonomic study of *vibrio costicola*, a moderately halophilic bacteria xvi
*VENTOSA, A. *see* MARQUEZ, M. C.
*VERACHTERT, H. & DAWOUD, E. Microbiology of lambic-type beers xi
*WAITES, W. M. Antimicrobial agents acting on bacterial spores vi
*WARRACK, J. K. *see* MASTERS, P. J.
†WATKINS, J. *see* JONES, F.
†WATSON, D. C. Potential risks to human and animal health arising from land disposal of sewage sludge i
*WEST, P. A. Strategies for isolation and enumeration of *Escherichia coli* and thermotolerant coli-forms from bivalve shellfish xix
†WHEELER, D. *see* LLOYD, B. J.

WHITBY, J. L. *see* DAVIES, K. W.
WIE, S. I., HAMMOCK, B. D., GILL, S. S., GRATE, E., ANDREWS, R. E. JR., FAUST, R. M., BULLA, L. A. JR. & SCHAEFFER, C. H. An improved enzyme-linked immunoassay for the detection and quantification of the entomocidal parasporal crystal proteins of *Bacillus thuringiensis* subspp. kurstaki and israelensis 447
*WILLIAMS, A. P. Medium engineering for pro- and eukaryotes iii
*WOLFENDEN, J. N_2 fixing bacteria associated with *Spartina anglica* xii
*WOLSTENHOLME, J. *see* BRODIE, C.
WOOD, P. A. *see* FELTHAM, R. K. A.
WOODCOCK, P. M. *see* BROXTON, P.
WRIGHT, S. J. L. *see* MAULE, A.
†YAMAMOTO, Y. *see* DAFT, M. J.
YATES, M. D. *see* COLLINS, C. H.
*YOUNG, T. W. Killer yeasts in relation to beer spoilage x
ZUIJDERUIJN, J. *see* MEISEL-MIKOŁAJCZYK, F.

Index of Subjects

Entries marked * refer to abstracts of titles of papers listed in Proceedings at Meetings of the Society for Applied Bacteriology. Small roman numerals refer to pages in Proceedings at Meetings of the Society for Applied Bacteriology.

Entries marked † refer to the titles of Symposium papers published in a separate volume.

*Abbot MS-2 (MASTERS, SLOCOMBE & WARRACK) xiv
†Algal blooms (DAFT, YAMAMOTO & BURNHAM) ii
Allogenic succession (GRIMES, SINGLETON & COLWELL) 247
Amylolytic bacteria (LINDGREN & REFAI) 221
*Antianaerobic agents (FERGUSON) v
*Antibiotic resistance (AL-JEBOURI) xv
*Antibiotics (SIMPSON & HARPER) vii
*Antifungal agents (BLATCHFORD) v
*Antimicrobial agents (WAITES) vi
*Antimicrobial resistance (GREENWOOD) vii
*Antimycobacterial agents (HOOPER) vi
*Antiviral agents (APPLEYARD) v
Aquatic bacteria (QUINN) 51
†Aquifiers (PARKER) i
Aromatic degradation (SLEAT & ROBINSON) 381
*ATP (STANNARD) iii
Bacillus licheniformis (BELL & DE LACY) 523
**Bacillus* spores (MOOGAN & QUESNEL) xiv
Bacillus stearothermophilus (SRIVASTAVA & MATHUR) 147
Bacillus subtilis (ABAD-LOZANO & RODRIGUES-VALERA) 339
Bacillus subtilis spores (GORMAN, SCOTT & HUTCHINSON) 153
†Bacterial pollution (EVISON) i
Bactericidal activity (LUSHER, DENYER & HUGO) 179
Bacteroides fragilis (MEISEL-MIKOŁAJCZYK, ROKOSZ, SAWICKA-GRZELAK, ZUIJDERUIJN, BECKMANN & PAELINCK) 405
Beef spoilage (DAINTY, EDWARDS & HIBBARD) 75
*Bivalve shellfish (WEST) xix
Brevibacterium sp. (BUI, MAESTRACCI, THIERY, ARNAUD & GALZY) 183
Brevibacterium sp. (MCLOUGHLIN & VALLOM) 485
*Brewing (SHAW) iv
Campylobacter jejuni (HÄNNINEN, KORKEALA & PAKKALA) 89
Cellulose degrading bacteria (MULLINGS & PARISH) 455, 479
*Chairman's introduction (PRIEST) ix
Characteristics of *Pseudomonas* sp. (CUTRI, MACAULEY & ROBERTS) 291
Characterizing bacteria (FELTHAM, WOOD & SNEATH) 279
Cholesterol-degrading bacteria (FERREIRA & TRACEY) 429
**Chromobacterium* sp. (FLINT) xii
*Cider (CARR) x
Clostridium perfringens (LAWRENCE, BROWN, BATES, SAUL, DAVIES, SPARK & ANIAN) 333
*Conductimetric measurements (BRODIE, MILLER & WOLSTENHOLME) xviii
*Confectionery industry (PUGH) iv
Cream contamination (GRIFFITHS & PHILLIPS) 107
Cryoprotectant medium (PELL & SNEATH) 165
Cyanobacterial and algal growth (MAULE & WRIGHT) 369
Dairy equipment surfaces (SPEERS, GILMOUR, FRASER & MCCALL) 139
*Dairy industry (SHAPTON) iv
*DEFT (PETTIPHER) iii
Dextranolytic *flavobacteria* (HAYWOOD & SLY) 505
*Dissociation constant (ISON) viii
ELISA (WIE, HAMMOCK, GILL, GRATE, ANDREWS, FAUST, BULLA & SCHAEFFER) 447
*Enterobacteriaceae (JONES & BETAIEB) xii
Enumeration of *Erwinia* (DE BOER) 517
Erwinia carotovora (LYON) 191
Erwinia isolation (MCCARTER-ZORNER, FRANC, HARRISON, MICHAUD, QUINN, SELLS & GRAHAM) 95
**Escherichia coli* (FLINT) xviii
Fermenter cultures (BLICKSTAD & MOLIN) 213
*Fish (GIBSON) v
Fish associated bacteria (MICHEL, SUPRIN & DE KINKELIN) 15
†Fish farming (AUSTIN & ALLEN-AUSTIN) ii
†Food manufacture (THORPE & STALKER) ii
*Growth kinetics (RHODES, QUESNEL & COLLARD) xix
Growth of salmonellas (JONES, COLLINS & HAYE) 423
*Growth potential in water (JAGO & STANFIELD) iv

†Heavy metals (LESTER & STERRITT) i
Human group B streptococci (FINCH & MARTIN) 273
†Industrial wastewater (HAMER, EGLI & MECHSENER) i
*Injury and resistance to antibiotics (HUMPHREY) xvi
*Intermediate moisture food (BRIMELOW) viii
*Isolation of campylobacters (FRICKER, MATHER & HUGHES) xviii
Kefir grains (MARSHALL, COLE & BROOKER) 491
Lactic acid decontamination (VAN NETTEN, VAN DE ZEE & MOSSEL) 169
*Lambic-type beers (VERACHTERT & DAWOUD) xi
*Legionellaceae (DENNIS) xviii
**Listeria* spp. (FENLON) xv
Magnesium monoperoxyphthalate hexahydrate (BALDRY) 499
*Maintenance energy (HOPTON) xvi
*Manipulation of micro-organisms (PATEL) ii
*Measuring water activity (ROBERTS) viii
*Meat (ROBERTSHAW) v
†Microbial degradation (SLATER) ii
Microbial pathogenicity (SMITH) 395
Milk (BRAMLEY, MCKINNON, STAKER & SIMPKIN) 317
Mycobacteria (COLLINS, GRANGE & YATES) 193
Myxococcus coralloides (MUÑOZ, ARIAS & MONTOYA) 69
Nitrogen fixation (HARPER & LYNCH) 131
Non-central *t*-distribution (MALCOLM) 175
†Off-shore oil and gas (STEWART) ii
*Osmotolerant yeasts (TILBURY) viii
Pasteurized milk (RODRIGUES & PETTIPHER) 125
**Penicillum roqueforti* (MEDINA, GAYA & NUÑEZ) xvii
Plasmid transfer (RUIZ-SAINZ, CHANDLER, JIMENEZ-DIAZ & BERINGER) 309
†Polluted marine sediments (PARKES & TAYLOR) ii
Polyhexamethylene biguanide interactions (BROXTON, WOODCOCK, HEATLEY & GILBERT) 115
*Pro- and eukaryotes (WILLIAMS) iii
*Protozoal disease (BROWN) vi
Pseudomonas groups (SHAW & LATTY) 59
Psychrotrophic bacteria (NUÑEZ, CHAVARRI & NUÑEZ) 23
*Rapid methods (GUTTERIDGE) ii
Rhizobium trifolii (RUIZ-SAINZ, BERINGER & GUTIERREZ-NAVARRO) 361
*River pollutants (HARRISON, BEVERIDGE & FLINT) xiii
Rumen bacteria (SILLEY & ARMSTRONG) 345
†Safe water (LLOYD, WHEELER & PARDON) i
*Salmonellas (FRICKER & GIRDWOOD) xiii
Salmonella typhimurium (HUMPHREY, LANNING & LEEPER) 355
Salmonella typhimurium (MACKEY & DERRICK) 299
*Sanitary water quality (ISBISTER, SIMMONS, DESOUZA & BERGELIN) xiii
*Sausages (DALTON & BOARD) xv
*Scotch whiskey (DOLAN) ix
†Sewage disposal (WATSON) i
†Sewage sludge (PIKE & RIDGEWAY) i
*Solar saltern (MARQUEZ, VENTOSA & RUIZ-BERRAQUERO) xvi
**Spartina anglica* (WOLFENDEN) xii
*Spoilage of beer (LAWRENCE) ix
*Spoilage organisms (DAY) xi
**Staphylococcus aureus* (GAYA, MEDINA, BAUTISTA & NUÑEZ) xvii
Staphylococcus epidermis (BROOKER & FULLER) 325
Sterilization dose (DAVIES, STRAWDERMAN & WHITBY) 31
Streptococci (COLMAN & BALL) 1
Streptococcus faecium (BELL & DE LACY) 229
Streptococcus pyogenes (PETTS) 479
Stockfish (VALDIMARSSON & GUÐBJÖRNDÓTTIR) 413
*Taxonomic study of *Aeromonas* (LEE) xvii
Thermophilic *Bacillus* sp. (CHOPRA & MATHUR) 263
Ureolytic bacteria (CROCIANI, BIAVATI, CASTAGNOLI & MATTEUZZI) 83
*Vending machines (ASHWORTH) xiii
Vibrio anguillarum (LARSEN) 237
**Vibrio costicola* (VENTOSA, RIVERO, RUIZ-BERRAQUERO & KOCUR) xvi
†Viruses in water (TYLER) i
*Water (GOULD) vii
†Water cycle (JONES & WATKINS) i
†Water's microbiological quality (COLBOURNE) i
†Water treatment (FALLOWFIELD & GARRETT) ii
*Wine spoilage (ANDREWS) x
Xenogenic transfusions (FAKHRI, AL-WAILI, AL-AZAWI & MAKKIYA) 531
*Yeasts (CLARK & TOOTH) xv
*Yeasts and beer spoilage (YOUNG) x

Contents

No. 1 (August 1984)

1 Identification of streptococci in a medical laboratory.
G. COLMAN & LYN C. BALL

15 A microdilution method for drug sensitivity testing of fish associated bacteria at 22°C.
C. MICHEL, LUCIENNE SUPRIN & P. DE KINKELIN

23 Psychrotrophic bacterial flora of raw ewes' milk, with particular reference to Gram negative rods.
J. A. NUÑEZ, F. J. CHAVARRI & M. NUÑEZ

31 The rationale and a computer evaluation of a gamma irradiation sterilization dose determination method for medical devices using a substerilization incremental dose sterility test protocol.
K. W. DAVIS, W. E. STRAWDERMAN & J. L. WHITBY

51 The modification and evaluation of some cytochemical techniques for the enumeration of metabolically active heterotrophic bacteria in the aquatic environment.
J. P. QUINN

59 A study of the relative incidence of different *Pseudomonas* groups on meat using a computer-assisted identification technique employing only carbon source tests.
B. G. SHAW & JOSEPHINE B. LATTY

69 Production and properties of a bacteriocin from *Myxococcus coralloides* D.
J. MUÑOZ, J. M. ARIAS & E. MONTOYA

75 Volatile compounds associated with the aerobic growth of some *Pseudomonas* species on beef.
R. H. DAINTY, R. A. EDWARDS & C. M. HIBBARD

83 Anaerobic ureolytic bacteria from caecal content and soft faeces of rabbit.
FRANCA CROCIANI, B. BIAVATI, PAOLA CASTAGNOLI & D. MATTEUZZI

89 Effects of various gas atmospheres on the growth and survival of *Campylobacter jejuni* on beef.
M.-L. HÄNNINEN, H. KORKEALA & P. PAKKALA

95 Soft rot *Erwinia* bacteria in surface and underground waters in southern Scotland and in Colorado, United States.
NANCY J. MCCARTER-ZORNER, G. D. FRANC, M. D. HARRISON, JANET E. MICHAUD, C. E. QUINN, I. ANN SELLS & D. C. GRAHAM

107 Detection of post-pasteurization contamination of cream by impedimetric methods.
M. W. GRIFFITHS & J. D. PHILLIPS

115 Interaction of some polyhexamethylene biguanides and membrane phospholipids in *Escherichia coli*.
P. BROXTON, P. M. WOODCOCK, F. HEATLEY & P. GILBERT

125 Use of the Direct Epifluorescent Filter Technique for predicting the keeping quality of pasteurized milk within 24 hours.
UBALDINA M. RODRIGUES & G. L. PETTIPHER

131 Nitrogen fixation by cellulolytic communities at aerobic-anaerobic interfaces in straw.
S. H. T. HARPER & J. M. LYNCH

139 Scanning electron microscopy of dairy equipment surfaces contaminated by two milk-borne micro-organisms.
J. G. S. SPEERS, A. GILMOUR, T. W. FRASER & R. D. MCCALL

147 Regulation of amylase bio-synthesis in growing and non-growing cells of *Bacillus stearothermophilus*.
R. A. K. SRIVASTAVA & S. N. MATHUR

153 Emergence and development of resistance to antimicrobial chemicals and heat in spores of *Bacillus subtilis*.
S. P. GORMAN E., M. SCOTT & E. P. HUTCHINSON

165 A note on the survival of bacteria in cryoprotectant medium at temperatures above 0°C.
PATRICIA A. PELL & P. H. A. SNEATH

169 A note on catalase enhanced recovery of acid injured cells of Gram negative bacteria and its consequences for the assessment of the lethality of L-lactic acid decontamination of raw meat surfaces.
P. VAN NETTEN, H. VAN DER ZEE & D. A. A. MOSSEL
175 A note on the use of the non-central *t*-distribution in setting numerical microbiological specifications for foods.
S. MALCOLM
179 A note on the effect of dilution and temperature on the bactericidal activity of potassium sorbate.
P. LUSHER, S. P. DENYER & W. B. HUGO
183 A note on the enzymic action and biosynthesis of a nitrile-hydratase from a *Brevibacterium* sp.
K. BUI, M. MAESTRACCI, A. THIERY, A. ARNAUD & P. GALZY
191 A note on the effect of temperature on the sensitivity of *Erwinia carotovora* sub sp. *atroseptica* to the phytoalexin rishitin.
G. D. LYON

No. 2 (October 1984)

193 *A review:* Mycobacteria in water
C. H. COLLINS, J. M. GRANGE & M. D. YATES
213 Growth and end-product formation in fermenter cultures of *Brochothrix thermosphacta* ATCC 11509^T and two psychrotrophic *Lactobacillus* spp. in different gaseous atmospheres
ELISABETH BLICKSTAD & G. MOLIN
221 Amylolytic lactic acid bacteria in fish silage
S. LINDGREN & O. REFAI
229 Heat injury and recovery of *Streptococcus faecium* associated with the souring of chub-packed luncheon meat
R. G. BELL & KAREN M. DE LACY
237 *Vibrio anguillarum*: Influence of temperature, pH, NaCl concentration and incubation time on growth
J. L. LARSEN
247 Allogenic succession of marine bacterial communities in response to pharmaceutical wastes
D. J. GRIMES, F. L. SINGLETON & R. R. COLWELL
263 Isolation, screening and characterization of thermophilic *Bacillus* species isolated from dairy products
A. K. CHOPRA & D. K. MATHUR
273 Human and bovine group B streptococci: two distinct populations
LESLEY A. FINCH & DIANA R. MARTIN
279 A general-purpose system for characterizing medically important bacteria to genus level
R. K. A. FELTHAM, PAULINE A. WOOD & P. H. A. SNEATH
291 Characteristics of pathogenic non-fluorescent (smooth) and non-pathogenic fluorescent (rough) forms of *Pseudomonas tolaasii* and *Pseudomonas gingeri*
S. S. CUTRI, B. J. MACAULEY & W. P. ROBERTS
299 Conductance measurements of the lag phase of injured *Salmonella typhimurium*
B. M. MACKEY & CHRISTINE M. DERRICK
309 Transfer of a host range plasmid from *Rhizobium leguminosarum* to fast-growing bacteria that nodulate soybeans
J. E. RUIZ-SAINZ, M. R. CHANDLER, R. JIMENEZ-DIAZ & J. E. BERINGER
317 The effect of udder infection on the bacterial flora of the bulk milk of ten dairy herds
A. J. BRAMLEY, C. H. MCKINNON, R. T. STAKER & D. L. SIMPKIN
325 The adhesion of coagulase negative staphylococci to human skin and its relevance to the bacterial flora of milk
B. E. BROOKER & R. FULLER
333 An affinity technique for the isolation of *Clostridium perfringens* type C from man and pigs in Papua New Guinea
G. LAWRENCE, R. BROWN, J. BATES, A. SAUL, M. DAVIS, R. SPARK & G. ANIAN

339 Photodynamic inactivation of *Bacillus subtilis* spores
J. L. ABAD-LOZANO & F. RODRIGUEZ-VALERA
345 Changes in metabolism of the rumen bacterium *Streptococcus bovis* H13/1 resulting from alteration in dilution rate and glucose supply per unit time
P. SILLEY & D. G. ARMSTRONG
355 The influence of scald water pH on the death rates of *Salmonella typhimurium* and other bacteria attached to chicken skin
T. J. HUMPHREY, D. G. LANNING & DENISE LEEPER
361 Effect of the fungicide captafol on the survival and symbiotic properties of *Rhizobium trifolii*
J. E. RUIZ-SAINZ, J. E. BERINGER & A. M. GUTIERREZ-NAVARRO
369 Herbicide effects on the population growth of some green algae and cyanobacteria
A. MAULE & S. J. L. WRIGHT

No. 3 (December 1984)

381 *A Review:* The bacteriology of anaerobic degradation of aromatic compounds
R. SLEAT & J. P. ROBINSON
395 The biochemical challenge of microbial pathogenicity
H. SMITH
405 Immunochemical and biological studies of antigens isolated from a strain of Bacteroides fragilis
FELICJA MEISEL-MIKOŁAJCZYK, ALICJA ROKOSZ, ANNA SAWICKA-GRZELAK, J. ZUIJDERUIJN, ILSE BECKMANN & JULIETTE PAELINCK
413 The microbiology of stockfish during the drying process
G. VALDIMARSSON & B. GUÐBJÖRNDÓTTIR
423 The effect of sodium sulphacetamide and sodium mandelate in brillant green agar on the growth of salmonellas
P. W. JONES, P. COLLINS & A. J. HAYLE
429 Numerical taxonomy of cholesterol-degrading bacteria
N. P. FERREIRA & R. P. TRACEY
447 An improved enzyme-linked immunoassay for the detection and quantification of the entomocidal parasporal crystal proteins of *Bacillus thuringiensis* subspp. *kurstaki* and *israelensis*
SIONG I. WIE, B. D. HAMMOCK, SARJEET S. GILL, ELIZABETH GRATE, R. E. ANDREWS JR., R. M. FAUST, L. A. BULLA JR. & C. H. SCHAEFFER
455 Mesophilic aerobic Gram negative cellulose degrading bacteria from aquatic habitat and soils
ROSANNE MULLINGS & J. H. PARISH
469 Colony morphogenesis in a group of cellulose degrading Gram negative rods from brackish habitats
ROSANNE MULLINGS & J. H. PARISH
479 The enrichment and early detection of *Streptococcus pyogenes* in skin lesions, using colistin, oxolinic acid, Todd Hewitt broth and latex agglutination
D. N. PETTS
485 The influence of ionic gradients on flocculation of *Brevibacterium* sp.
A. J. MCLOUGHLIN & J. K. VALLOM
491 Observations on the structure of kefir grains and the distribution of the microflora
VALERIE M. MARSHALL, WENDY M. COLE & B. E. BROOKER
499 The antimicrobial properties of magnesium monoperoxyphthalate hexahydrate
M. G. C. BALDRY
505 Characterization of a dextranolytic biotype of *Flavobacterium multivorum* from soil
A. C. HAYWOOD & L. L. SLY
517 Enumeration of two competing *Erwinia carotovora* populations in potato tubers by a membrane filter-immunofluorescence procedure
S. H. DE BOER
523 Influence of NaCl, $NaNO_2$ and oxygen on the germination and growth of *Bacillus licheniformis*, an organism of chub-packed luncheon meat
R. G. BELL & KAREN M. DE LACY

531 A note on xenogenic transfusions of macrophages in experimental septicaemia
O. FAKHRI, N. AL-WAILI, H. AL-AZAWI & A. MAKKIYA
533 Book reviews
i The Society for Applied Bacteriology: Meetings
i Index